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MAY 03 2007REMARKSI. Introduction

In response to the Office Action dated February 6, 2007, claims 43, 44, 46, 50-52, 54, 58-60 and 62 have been cancelled and claims 1, 9, 17, 45, 47, 48, 53, 55, 56, 61, and 63 have been amended. Claims 1-42, 45, 47-49, 53, 55-57, 61, and 63 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Allowable Subject Matter

In paragraph 13, the Office Action allows claims 25-42. The Applicants thank the Examiner for the indication of allowable subject matter.

In paragraph 14, the Office Action indicates that claims 46, 50, 54-55- 58, and 62-63 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Claims 45, 48, 53, 56, and 61 have been amended to recite allowable subject matter.

III. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for purposes of patentability.

IV. Non Art Rejections

On page (2), in paragraph (1)-(2), the Office Action rejected claims 47 and 55 under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The Applicant thanks the Examiner for noting these errors, and has amended claims 47 and 55 accordingly. Should these amendments be unsatisfactory, the Applicant urges the Examiner to contact the Applicant's attorney by telephone so that the matter may be expeditiously resolved.

Also, on page (2), the Office Action rejected claims 1-24 under 35 U.S.C. §112, first paragraph, because the best mode contemplated by the inventor has not been disclosed.

The Applicant respectfully traverses this rejection. MPEP 706.03(d) states that a rejection based on the notion that the best mode is concealed should be rare.

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§ 7.31.04 Rejection, 35 U.S.C. 112, 1st Paragraph: Best Mode Requirement

Claim [1] rejected under 35 U.S.C. 112, first paragraph, because the best mode contemplated by the inventor has not been disclosed. Evidence of concealment of the best mode is based upon [2].

Examiner Note:

1. This rejection must be preceded by form paragraph 7.30.01 or 7.103.
2. In bracket 2, insert the basis for holding that the best mode has been concealed, e.g., the quality of applicant's disclosure is so poor as to effectively result in concealment.
3. Use of this form paragraph should be rare. See MPEP §§ 2165-2165.04.

The reasons best mode rejections are rare are outlined in MPEP §§ 2165 - 2165.04.

2165.03 Requirements for Rejection for Lack of Best Mode [R-1]

ASSUME BEST MODE IS DISCLOSED UNLESS THERE IS EVIDENCE TO THE CONTRARY

The examiner should assume that the best mode is disclosed in the application, unless evidence is presented that is inconsistent with that assumption. It is extremely rare that a best mode rejection properly would be made in *ex parte* prosecution. The information that is necessary to form the basis for a rejection based on the failure to set forth the best mode is rarely accessible to the examiner, but is generally uncovered during discovery procedures in interference, litigation, or other *inter partes* proceedings.

In other words, in an *ex parte* proceeding, the Examiner is not privy to the information that is required to determine whether the best mode has been presented in the Applicant's disclosure. Because of this, MPEP 2165.03 indicates that the Examiner is to assume that the best mode is disclosed unless there is evidence to the contrary:

The best mode inquiry is a two step process. First, the Examiner should determine whether, at the time the application was filed, the inventor knew of a mode of practicing the claimed invention that the inventor considered to be better than any other. Second, the Examiner is to compare what was known from the first step with what is actually disclosed (not what is claimed). This is also described in MPEP § 2165.03:

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EXAMINER MUST DETERMINE WHETHER THE INVENTOR KNEW THAT ONE MODE WAS BETTER THAN ANOTHER, AND IF SO, WHETHER THE DISCLOSURE IS ADEQUATE TO ENABLE ONE OF ORDINARY SKILL IN THE ART TO PRACTICE THE BEST MODE

According to the approach used by the court in *Chemcast Corp. v. Arco Industries*, 913 F.2d 923, 16 USPQ2d 1033 (Fed. Cir. 1990), a proper best mode analysis has two components:

(A) >Determine whether, at the time the application was filed, the inventor knew of a mode of practicing the claimed invention that the inventor considered to be better than any other.<

The first component is a subjective inquiry because it focuses on the inventor's state of mind at the time the application was filed. Unless the examiner has evidence that the inventors had information in their possession

(1) at the time the application was filed

(2) that a mode was considered to be better than any others by the inventors,

there is no reason to address the second component and there is no proper basis for a best mode rejection. If the facts satisfy the first component, then, and only then, is the following second component analyzed:

(B) Compare what was known in (A) with what was disclosed - is the disclosure adequate to enable one skilled in the art to practice the best mode?

A best mode rejection is proper only when the first inquiry can be answered in the affirmative and the second is answered in the negative. Again, MPEP § 2165.03 is instructive:

A best mode rejection is proper only when the first inquiry can be answered in the affirmative, and the second inquiry answered in the negative with reasons to support the conclusion that the specification is non-enabling with respect to the best mode.

Here, the best mode rejection is based on a claim that claims 1-24 fail to interrelate essential elements of the invention. However, this is not the standard for a best mode rejection. Instead, there must be an inquiry as to what the inventor's subjective best mode of practicing the invention

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was at the time the application was filed, and an assessment as to whether or not the specification (not the claims) discloses that best mode.

Accordingly, the Applicant respectfully traverses the rejection of claim 1-24 as failing to disclose the best mode.

The Office Action also rejects claims 1-24 under 35 U.S.C. § 112, first paragraph, as based on a disclosure that is not enabling. The Applicants respectfully traverse this rejection as well, but have amended the claims to clarify the interrelationship between elements. As amended, the claims are fully supported by the specification, particularly FIGs. 13 and 16 and the text appurtenant thereto.

V. The Cited References and the Subject Invention

A. The Dabak Reference

U.S. Patent No. 7,154,958, issued December 26, 2006 to Dabak et al. disclose a code division multiple access wireless system with time reversed space time block transmitter diversity. A wireless communication network (10) includes a wireless transmitter having a plurality of antennas (AT1, AT1_j). The transmitter includes for each of a plurality of different user channels (Dⁿ), circuitry (22ⁿ) for providing a plurality of groups of symbols in a first symbol group sequence (D₁ⁿ). Each of the plurality of different user channels includes circuitry (24₁ⁿ) for forming a first modulated symbol group sequence for the user channel by modulating the symbols in the first symbol group sequence with a unique code that corresponds to the user channel and distinguishes the user channel from each other of the plurality of different user channels and circuitry (26₁) for combining the first modulated symbol group sequences for transmission by a first antenna (AT1_j). Each of the plurality of different user channels includes circuitry (22ⁿ) for forming a second symbol group sequence (D₂ⁿ) by time reversing symbols in at least some of the groups of symbols.

B. The Hammons Jr. Reference

U.S. Publication No. 2003/0194022, published October 16, 2003 to Hammons Jr., et al. disclose a method of generating space-time codes for generalized layered space-time architectures. Space-time codes for use with layered architectures with arbitrary numbers of antennas are provided such as rate k/n convolutional codes (e.g., rates higher than or equal to 1/n where n is the number of transmit antennas). Convolutional codes for layered space-time architectures are generated using matrices over the ring F[[D]] of formal power series in variable D.

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C. The Hammons Jr. Reference

U.S. Publication No. 2004/0146014, published July 29, 2004 to Hammons Jr. et al. disclose a method and constructions for space-time codes for PSK constellations for spatial diversity in multiple-element antenna systems. General binary design criteria for PSK-modulated space-time codes are provided. For linear binary PSK (BPSK) codes and quadrature PSK (QPSK) codes, the rank (i.e., binary projections) of the unmodulated code words, as binary matrices over the binary field, is used as a design criterion. Fundamental code constructions for both quasi-static and time-varying channels are provided.

D. The Giallorenzi Reference

U.S. Publication No. 2002/0051435, published May 2, 2002 to Giallorenzi discloses a two-dimensional channel bonding in a hybrid CDMA/FDMA fixed wireless access system to provide finely variable rate channels. A communications system employs the use of both synchronous CDMA and FDMA to provide a variable bandwidth waveform with multiple bonded transmitters and receivers that are agile in both frequency and PN code to permit a variable bandwidth and variable rate multiple access system. In a first aspect the teachings provide the use of both CDMA and FDMA together to enable an improved concentration efficiency by making a larger pool of bandwidth available to each user. In a second aspect these teachings enable channel bonding across both code space and frequency space, thus making the system capable of operating within a variable (not necessarily contiguous) bandwidth and at a finely variable rate.

E. The Stahle Reference

U.S. Patent No. 6,956,841, issued October 18, 2005 to Stahle et al. disclose a receiver and method of receiving a desired signal. The invention relates to a receiver for receiving a signal of a desired user, which signal may arrive at the receiver in different components along several different paths at several different delays. The receiver includes an antenna array, rake branches, and at least one search branch. At least one rake branch includes a plurality of beam formers, a plurality of correlators coupled to the inputs of the beam formers, a demodulator coupled to the outputs of the correlators, a code generator for generating codes required by the correlators, controls means, and calculation means. The calculation means are adapted to calculate and transmit to the control means,

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on the basis of the outputs of the correlators, information on how the code generator and the beam formers are to be controlled.

VI. Office Action Prior Art Rejections

In the interest of expedited prosecution, the Applicants have amended claims 45, 48, 53, 56, and 61 to recite subject matter identified as patentable. Allowance is therefore respectfully requested.

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VII. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

Date: May 3, 2007


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